

PRELIMINARY ESTIMATES OF SUBSISTENCE SALMON HARVEST
IN THE YUKON RIVER DRAINAGE, 1990

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PREFACE

This report was completed at this time to meet US/Canada project reporting requirements. All harvest estimates in this report are preliminary and subject to revision. Final estimates for 1990 will be published in the 1990 Yukon Area Annual Management Report.



SPONSORSHIP

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INTRODUCTION

Subsistence salmon fishing in the Yukon River drainage has a long history. Subsistence salmon harvest data has been collected by the Division of Commercial Fisheries through the use of personal interviews and/or catch calendars from 1961 to the present, with the exception of 1988. Throughout this period, survey methods and harvest reporting have varied. Additionally, in recent years subsistence fishing permit catch information has been required for three sections of the Upper Yukon Area.

Due to funding limitations, the Department was unable to send survey crews to all villages in 1983 and 1984 to interview fishermen; however, in 1985 personal interviews were once again conducted in most villages. During 1986 and 1987, increased funding provided by federal U.S./Canada support allowed the most comprehensive subsistence fishery harvest surveys on record. Results from 1986 (Brannian and Gnath 1988) and 1987 (Bergstrom and Gnath 1988) indicated a need for revision of the survey methodology.

In 1988, the Subsistence Division modified the subsistence harvest survey design and collected the subsistence harvest data (Walker et al 1989). A comprehensive list of all households in each community in the Yukon River drainage was created. Households were classified into two strata: as usually fishing for subsistence or not usually fishing for subsistence. The revised methodology allowed for calculation of confidence intervals for the subsistence harvest estimates for the first time. The Commercial Fisheries Division used the methodology developed in 1988 to conduct the surveys and estimate the subsistence salmon harvest by village for 1989 (Holder and Hamner 1990).

From 1986 to the present, Canadian subsistence harvest information has been collected by the Canadian Department of Fisheries and Oceans (DFO).

METHODS

The subsistence survey methodology developed in 1988 by the Subsistence Division and used by the Commercial Fisheries Division for the 1989 survey was not used for estimating the 1990 subsistence salmon harvest. The old stratification system formed by the combinations of village and usually/don't usually fish was abandoned. This action was taken in an effort to improve both the accuracy and precision of the estimate of the drainage-wide subsistence harvest. Households were classified into one of five categories based upon the historic level of subsistence catches for

each household. Five categories of "use" were defined: (1) no information, (2) non-user, (3) light user, (4) medium user, and (5) heavy user. New strata were formed by the combinations of village and "use". Assuming that households tend to harvest the same number of fish in the current year as they have historically, this stratification system allows the households with the heaviest use of the resource to be sampled more intensively. This should produce a reduction in the variance of the estimates in comparison to past surveys.

Households within a village were classified into use categories based upon information on the total number of fish harvested by the households, as reported in the 1988 and 1989 surveys. For those households in which information was collected in both surveys, the mean total fish harvested was used for classification purposes. For those households in which information was collected in only one of the surveys, the reported harvest for the single year was used for classification purposes. Households in which no information was collected in either survey were placed into the "no information" category.

Different definitions of light user, medium user, and heavy user were used for the Lower Yukon Area (Districts 1, 2, and 3) and Upper Yukon Area (Districts 4, 5, and 6). For villages in the Lower Yukon, light users were defined as households harvesting between 1 and 200 fish, medium users were defined as those harvesting between 201 and 500 fish, and heavy users were defined as those harvesting more than 500 fish. For villages in the Upper Yukon, light users were defined as those households harvesting between 1 and 100 fish, medium users were defined as those households harvesting between 101 and 700 fish, and heavy users were defined as those households harvesting more than 700 fish. These definitions were established based upon data collected in the 1988 and 1989 surveys.

A stratified random sample (Cochran 1977) was drawn from the strata formed by combinations of village and use. Sample sizes were determined according to the following rules: (1) for villages having 25 or fewer households, all 5 village*use strata were censused; (2) all village*use strata having use = 4 or use = 5 were censused; (3) 30% of village*use strata having use = 3 were sampled; (4) 10% of village*use strata having use = 2 were sampled; and (5) 20% of village*use strata having use = 1 were sampled. Two exceptions to rules (3), (4) and (5) exist: (i) if the stratum size was less than or equal to 4, the stratum was censused; and (ii) if the rules resulted in a stratum sample size of less than 4, the sample size was increased to 4. The above sampling rules resulted in a drainage-wide sample size of 1,219 households, from a population of 2,209 households (excluding permit villages).

An attempt was made to personally interview all households included in the sample. Interview questions included the numbers of

chinook, summer chum, fall chum, and coho salmon harvested by members of the household for subsistence purposes as well as the type of fishing gear that was used. Questionnaires were sent to those households for which a personal interview could not be obtained. Those households contacted, via interview or questionnaire, were assumed to constitute a stratified random sample. Estimates of the number of salmon harvested for subsistence purposes were obtained using traditional stratified random sampling methodology (Cochran 1977).

The location of communities and fishing district boundaries for the Alaskan portion of the Yukon River drainage are shown in Figure 1. In 1990, interviews with Lower Yukon Area fishermen were conducted in eleven villages, while in the Upper Yukon Area, interviews were conducted in thirteen major communities along the mainstem Yukon River and seven communities along significant tributaries of the Yukon River (Table 1). Surveys were not conducted in the coastal communities of Scammon Bay and Hooper Bay which harvest salmon bound primarily for the Yukon River. Coastal community harvest was not estimated for the 1990 calendar year.

A regulation was in effect until July of 1990 that prohibited non-rural residents from participation in subsistence salmon harvests. Non-rural residents harvested salmon under personal-use fishing regulations up until July, and then were eligible to harvest salmon under subsistence fishing regulations. Personal-use harvest estimates were only separated from subsistence harvests in the Lower Yukon Area. For annual comparison, it was necessary to identify Upper Yukon Area personal-use/subsistence harvests as being by village or nonvillage residents.

Subsistence fishing permits were required in three areas within the upper Yukon drainage: (1) the entire Tanana River drainage; (2) the Yukon River between Hess Creek and Dall River; and (3) the Yukon River between the upstream mouth of Twenty-two Mile Slough and the U.S./Canada border. For those villages in which subsistence permits were required, the preliminary subsistence harvest estimate is the sum of reported harvest from returned permits expanded by the average catch per permit for the unreturned permits. Permit information was also sorted by mailing address so that village harvest information could be compared with the historical database. These estimates may be adjusted after further analysis.

In the District 4 commercial fishery there is a very limited market for summer chum salmon flesh, while the roe has a significant commercial market. As a result, commercial fishermen extract and sell roe from their catch and retain the carcasses for subsistence use. During the 1980-85 period, it is likely that many fishermen reported this portion of their commercial harvest as subsistence fish. In fact, it is probable that the unmarketable commercial product may have simply replaced a large portion of the subsistence harvest in this area. During 1985, Subsistence Division personnel

conducted subsistence harvest surveys in the villages of Kaltag and Nulato. Questions regarding summer chum harvest were posed in such a way as to eliminate reporting of "surplus" commercially caught fish as subsistence. For this reason, summer chum harvest estimates from these villages for 1985 were much lower than in previous years. Since 1986, subsistence surveys for the Yukon River drainage were conducted in such a manner as to estimate the number of summer chum salmon taken by commercially related activities and those taken by traditional subsistence fishing activities. Summer chum salmon taken during commercial related activities are included as part of the commercial harvest numbers. The District 4 summer chum salmon subsistence harvest estimates reported here represent those fish harvested only for subsistence purposes, and do not include fish made available from commercially related activities.

RESULTS AND DISCUSSION

Estimates of subsistence and personal use harvest by village for the entire Yukon River drainage are presented in Table 2. Table 3 shows the subsistence and personal use salmon catches taken under authority of a permit for 1990. Since the department issues the permit for a particular fishing area, these estimates indicate where the fish were harvested. Table 4 shows the permit information sorted by mailing address, thus indicating a particular community's use of Yukon salmon rather than community harvest. Harvest estimates for commercial, subsistence, and nonvillage fishery categories for 1990 are presented by fishing district in Table 5. Subsistence harvest estimates for 1990 by species, village, and fishing district with means and 95% confidence intervals for the totals are presented for areas not requiring subsistence permits in Tables 6-9.

The estimated Yukon River drainage subsistence salmon harvest in Alaska for 1990 totalled 400,433 fish, and was comprised of 52,113 chinook, 118,471 summer chum, 182,033 fall chum, and 47,816 coho salmon (Table 2). These estimates do not include commercially caught summer chum salmon retained for subsistence purposes in District 4. The court ruled in July of 1990 that every resident of the State of Alaska was an eligible subsistence user, making the personal use category obsolete. Most salmon harvested under the old personal use category continue to be documented by subsistence permits if a person fished where a permit was required. Salmon harvested by urban residents fishing where a permit is not required are not documented. An estimated additional 13,688 salmon harvested in the Canadian subsistence fishery consisted of 7,603 chinook and 6,085 fall chum salmon. Combining the Alaskan and Canadian estimates results in a total Yukon River drainage subsistence and permit harvest estimate of 414,121 salmon consisting of 59,716 chinook, 118,471 summer chum, 188,118 fall chum, and 47,816 coho salmon.

Lower Yukon Area

During 1990, an estimated 20,730 chinook, 68,750 summer chum, 13,638 fall chum and 10,679 coho salmon were harvested by fishermen representing 523 households for subsistence and personal use in the Lower Yukon Area (Table 2). Catches of chinook salmon were 35% above the 1985-89 average. Catches of summer chum, fall chum and coho salmon were 5%, 42%, and 9% below the 1985-89 averages, respectively. Fall chum and coho salmon catches were probably slightly higher than reported because some fishing occurred after the interviews were completed.

Upper Yukon Area

The 1990 Upper Yukon Area (excluding Canada) subsistence and personal use harvest was estimated to be 31,383 chinook, 49,721 summer chum, 168,395 fall chum, and 37,137 coho salmon (Table 2). Catches of chinook and fall chum were 1% and 4% below the 1985-89 averages. Harvest of coho salmon was 11% above the 1985-89 average harvest. Due to the exclusion of commercially caught chum salmon used for subsistence purposes, the summer chum salmon subsistence harvest estimate for 1990 cannot be compared directly to the 1985-89 average. An estimated total of 19,832 summer chum salmon were taken for subsistence utilization within District 4 during 1990, with an estimated additional 183,420 summer chum salmon carcasses potentially available for subsistence use as a by-product of the commercial roe fishery.

Canada

Indian food fish and domestic catch data were collected by a native organization under contract to the Canadian Department of Fisheries and Oceans (DFO). The 1990 Canadian non-commercial harvest was estimated to be 7,603 chinook and 6,085 fall chum salmon.

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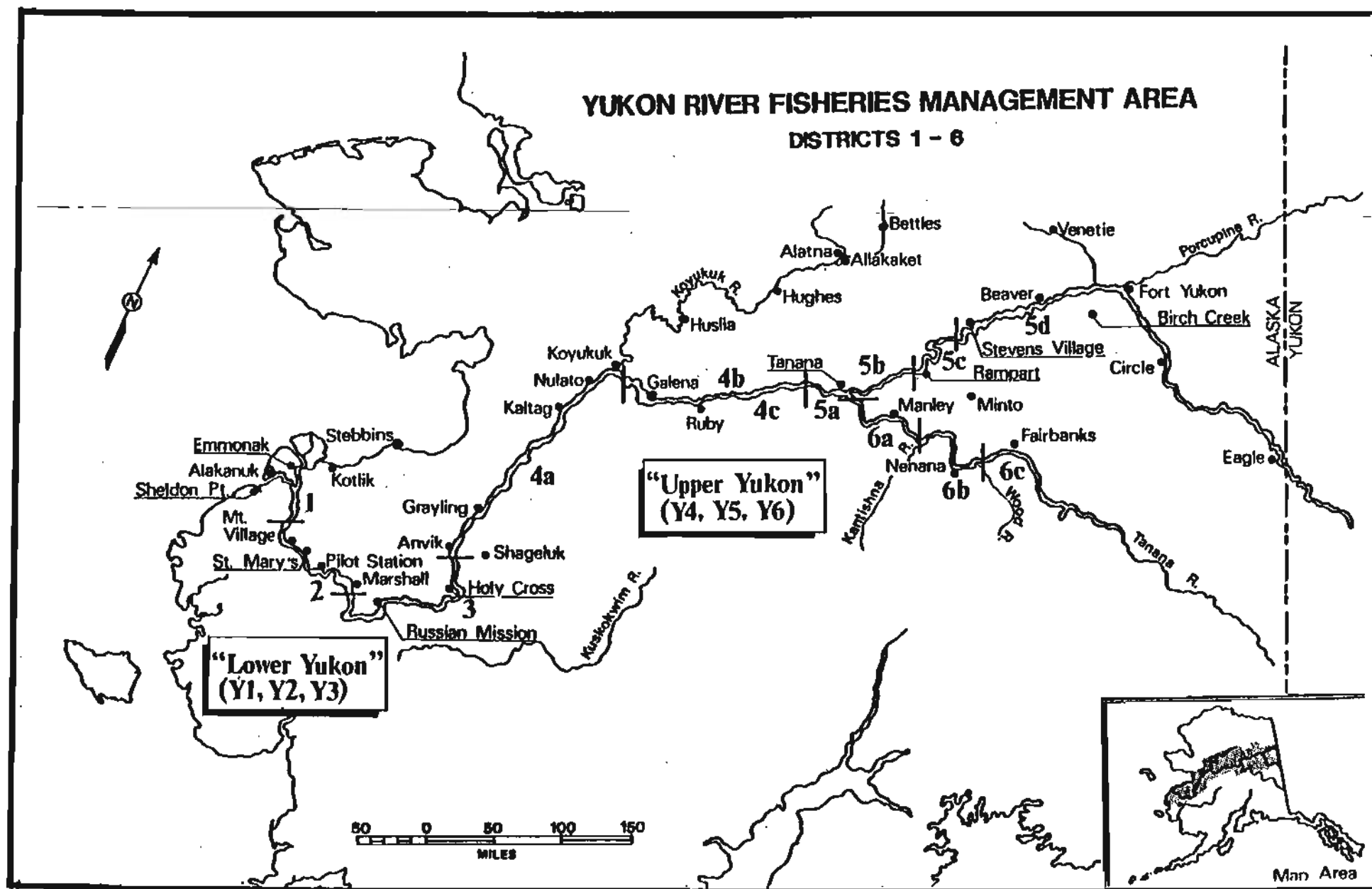


Figure 1. Map of the Alaskan portion of the Yukon River drainage, showing communities and fishing districts.

Table 1. Yukon Area communities and dates of community visits
for subsistence salmon surveys, 1990.

<u>Community</u>	<u>Dates of Survey</u>
Hooper Bay	Not Surveyed
Scammon Bay	Not Surveyed
Sheldon Point	September 6
Alakanuk	September 1
Emmonak	August 30-31
Kotlik	September 7
Mountain Village	September 13
Pitka's Point	September 11-12
St. Mary's	September 12
Pilot Station	September 14
Marshall	September 19
Russian Mission	September 19
Holy Cross	September 15
Anvik	September 18
Shageluk	September 17
Grayling	September 18
Kaltag	October 9
Nulato	October 11
Koyukuk	October 10
Galena	October 8-12
Ruby	October 16
Huslia	October 16
Hughes	October 15-16
Allakaket	October 22-23
Alatna	November 7
Bettles	October 22
Tanana	October 25-26
Rampart	November 12-13
Stevens Village	November 1
Beaver	October 18
Fort Yukon	October 30-31
Circle	Permits
Central	Permits
Eagle	Permits
Venetie	November 1
Chalkyitsik	November 1-2
Manley	Permits
Minto	Permits
Nenana	Permits
Healy	Permits

Table 2. Preliminary Yukon River drainage subsistence and personal use salmon harvest, 1990. a

Village	Survey Date		Fishing Households b	Chinook	Summer Chum	Fall Chum	Coho	Set Nets	Drift Nets	Fish Wheels
Sheldon Pt.	9/6		12	756	1,458	102	78	12	0	0
Alakanuk	9/1		53	871	7,265	267	156	42	11	0
Eamonak	8/30-31	c	83	1,873	15,215	2,353	1,283	27	56	0
Kotlik	9/7	d	55	3,119	13,061	2,613	1,784	35	19	1
Personal Use	permits		18	534	295	60	8	0	18	0
Y-1 Subtotal			221	7,153	37,294	5,395	3,309	116	104	1
Mt. Village	9/13		85	1,792	9,950	1,566	1,754	16	69	0
Pitkas Pt.	9/11-12		13	391	1,438	150	52	3	10	0
St. Marys	9/12		48	2,085	8,077	806	463	3	45	0
Pilot Station	9/14	e	56	3,786	6,698	1,941	1,968	10	46	0
Marshall	9/19		40	1,492	2,290	1,724	2,107	7	33	0
Y-2 Subtotal			242	9,546	28,453	6,187	6,344	39	203	0
Russian Mission	9/19		27	1,694	2,146	878	688	19	8	0
Holy Cross	9/15		33	2,337	857	1,178	338	15	18	0
Y-3 Subtotal			60	4,031	3,003	2,056	1,026	34	26	0
Lower Yukon Total			523	20,730	68,750	13,638	10,679	189	333	1
Anvik	9/18		14	481	2,032	583	236	7	2	5
Shageluk	9/17	f	12	62	6,518	0	0	12	0	0
Grayling	9/18		9	144	1,430	1,405	10	5	2	2
Kaltag	10/9		39	2,244	6,956	2,327	501	6	21	12
Mulato	10/11		55	2,788	502	3,546	845	7	23	25
Koyukuk	10/10		12	876	283	860	162	5	4	3
Galena	10/8-12		100	3,134	1,760	3,202	572	48	19	33
Ruby	10/16		45	811	351	3,352	974	24	0	21
Y-4 Subtotal			286	10,540	19,832 g	15,275	3,300	114	71	101
Tanana	10/25-26		42	2,284	5,905	41,145	8,580	17	0	25
Rampart	11/12-13		15	1,481	58	10,818	591	9	0	6
Fbks Sub/Per-Use	permits	h	48	2,533	860	4,167	41	43	0	5
Stevens Village	11/1		16	1,295	1,671	3,857	479	10	0	6
Beaver	10/18		11	721	108	757	172	11	0	0
Ft. Yukon	10/30-31		41	4,051	145	11,627	727	11	0	30
Circle/Central	permits	i	21	2,201	1,377	7,814	221	13	0	8
Eagle	permits	j	35	1,845	384	8,389	3	32	0	3
Y-5 Subtotal			229	16,411	10,508	88,574	10,814	146	0	83
Main River Totals			1,038	47,681	99,090	117,487	24,793	449	404	185

-Continued-

Table 2. Preliminary Yukon River drainage subsistence and personal use salmon harvest, 1990. a
(Continued)

Village	Survey Date	Fishing Household	Chinook	Summer Chum	Fall Chum	Coho	Set Nets	Drift Nets	Fish Wheels
Manley	permits k	28	1,509	2,637	28,885	8,808	20	-	8
Minto	permits l	17	249	785	6,800	2,436	10	-	7
Nenana	permits m	34	1,441	1,515	13,956	8,051	17	-	17
Healy	permits n	3	0	0	2,283	1,774	2	-	1
Fbks Sub/Pers-use permits o		120	560	1,134	1,789	1,288	97	-	23
Y-6 Subtotal		202	3,759	6,071	53,713	22,357	146	0	56
Huslia	10/16	15	198	7,368	846	235	15	0	0
Hughes	10/15-16	10	90	509	70	43	10	0	0
Allakaket/Alatna	10/22-23, 11/7 p	14/5	356	5,343	3,050	36	19	0	0
Koyukuk R. Subtotal		44	644	13,220	3,966	314	44	0	0
Venetie	11/1	13	29	0	5,377	348	13	0	0
Chalkyitsik	11/1-2	6	0	90	1,490	4	6	0	0
Subtotal Chandalar/Black Rivers		19	29	90	6,867	352	19	0	0
Subtotal Upper Yukon (Alaska)		780	31,383	49,721	168,395	37,137	469	71	240
Yukon River Drainage (Alaska) Total		1,303	52,113	118,471	182,033	47,816	658	404	241
Old Crow	q	-	247	-	2,410	-	-	-	-
Yukon River Mainstem Canada	q	-	7,356	-	3,675	-	-	-	-
Yukon Territory Totals	q	-	7,603	-	6,085	-	-	-	-
Grand Total Yukon River Drainage		1,303	59,716	118,471	188,118	47,816	658	404	241

- a Subsistence data collected by Commercial Fisheries Division. Gear data represents estimated household use.
b Estimated numbers of households that fished.
c Includes 944 chinook, 1,838 summer chum, 1,165 fall chum, and 870 coho salmon from ADF&G test fish catches.
d Includes 1,323 chinook, 2,189 summer chum, 944 fall chum, and 713 coho salmon from ADF&G test fish catches.
e Includes 542 chinook, 1,882 summer chum, 1,077 fall chum, and 869 coho salmon from ADF&G test fish catches.
f Shageluk harvest data from households fishing mainstem Yukon River and Innoko River.
g Does not include fish taken during commercial roe fishery used for subsistence.
h Data from fishermen who fished between Hess Creek and Dall River (Yukon River bridge area).
Of the 63 permits issued, 57 returned their permits and 42 fished. Estimate 48 fishing households.
Does not include residents of Stevens Village who were issued permits.
i Includes Circle and vicinity, and Central.
Of the 29 permits issued, 24 returned their permits and 18 fished. Estimate 21 fishing households.
j Includes Eagle and vicinity, Eagle Village, Chicken, and Tok.
Of the 49 permits issued, 48 returned their permits and 34 fished. Estimate 35 fishing households.
k Manley. Of the 36 permits issued, 32 returned their permits and 24 fished. Estimate 28 fishing households.
Includes 548 chinook, 416 summer chum, 4,042 fall chum, and 1,357 coho salmon from ADF&G test fishwheel.
l Minto. Of the 25 permits issued, 15 returned their permits and 7 fished. Estimate 17 fishing households.
m Nenana. Of the 46 permits issued, 42 returned their permits and 30 fished. Estimate 34 fishing households.
Includes 418 chinook, 443 summer chum, and 329 fall chum salmon from ADF&G test fishwheel.
n Healy. Of the 5 permits issued, 5 returned their permits and 3 fished. Three fishing households.
o Data from permitted fishermen who fished the Tanana River.
Of the 175 permits issued, 166 returned their permits and 111 fished. Estimate 120 fishing households.
p Includes 24 summer chum salmon from Bettles.
q Indian Food Fish and Domestic catch data from Department of Fisheries & Oceans, Whitehorse, Yukon Territory (preliminary data).

Table 3. Preliminary subsistence and personal use salmon catches taken under authority of a permit, 1990.

Permit Type	Permit Number	Issued	Returned	%	Did not Fish 1/	Reported Harvest				2/ Expanded Harvest			
						Chinook	SChum	FChum	Coho	Chinook	SChum	FChum	Coho
PERSONAL USE													
Lower Yukon	LY-#-90	19	16	84%	1	450	256	60	8	534	295	60	8
Upper Yukon, Haul Road	PY-#-90	38	35	92%	10	1,527	641	3,723	18	1,659	695	4,041	18
Upper Yukon, Circle/Eagle	PE-#-90	5	5	100%	1	240	0	13	5	240	0	13	5
Upper Yukon, Other	PR-#-90	3	1	33%	0	2	0	0	0	6	0	0	0
Tanana River Fishing Subdistrict 6A	PA-#-90	1	1	100%	1	0	0	0	0	0	0	0	0
Tanana River Fishing Subdistrict 6B	PB-#-90	4	4	100%	1	9	12	40	35	9	12	40	35
Tanana River Fishing Subdistrict 6C	PC-#-90	152	144	95%	42	442	918	1353	1120	466	966	1,425	1,184
PERSONAL USE SUBTOTAL		222	206	93%	56	2,670	1,827	5,189	1,186	2,914	1,968	5,579	1,250
SUBSISTENCE													
Yukon River near Haul Road Bridge	SY-#-90	26	25	96%	9	2033	3493	1109	455	2,114	3,633	1,153	473
Yukon River near Circle and Eagle	SE-#-90	80	74	93%	21	3,670	1,629	14,979	201	3,970	1,761	16,191	219
Tanana River Fishing Subdistrict 6A	SA-#-90	42	36	86%	10	821	1,834	23,915	7,051	3/ 1,507	2,556	31,941	9,584
Tanana River Fishing Subdistrict 6B	SB-#-90	70	58	83%	20	816	1,523	16,003	9,155	4/ 1,402	2,279	19,644	11,051
Tanana River Fishing Subdistrict 6C	SC-#-90	19	18	95%	12	15	69	279	50	16	73	294	53
Tanana River Upstream of Subdistrict 6C	SU-#-90	1	1	100%	1	0	0	0	0	0	0	0	0
Delta River Carcasses	SD-#-90	7	7	100%	4	0	0	750	0	0	0	750	0
SUBSISTENCE SUBTOTAL		245	219	89%	77	7,355	8,548	57,035	16,912	9,009	10,301	69,973	21,380
GRAND TOTAL		467	425	91%	133	10,025	10,375	62,224	18,098	11,923	12,269	75,552	22,630

1/ The number of fishermen who did not fish based on returned permits.

2/ Expanded harvest = (reported harvest by species/permits returned) x permits issued.

3/ Includes 548 chinook, 416 summer chum, 4042 fall chum, and 1357 coho salmon given away as part of the Departments test fish wheel program.

4/ Includes 418 chinook, 443 summer chum, and 329 fall chum salmon given away as part of the Departments test fish wheel program.

Table 4. Preliminary subsistence and personal use salmon catch taken under authority of a permit listed by community of residence, 1990.

Community	Permits		Did not Fish 1/	Reported Harvest				2/ Chinook	Expanded Harvest			Coho	
	Issued	Returned		Chinook	SChum	FChum	Coho		SChum	FChum	Coho		
Anchorage Mat/Su Borough	12	12	100%	3	276	109	70	17		276	109	70	17
Anchorage	3	3		0									
Chugiak	2	2		1									
Talkeetna	2	1		-									
Wasilla	5	3		1									
Central	7	7	100%	0	184	5	165	5		184	5	165	5
Chicken	2	2	100%	1	0	0	29	0		0	0	29	0
Circle	22	17	77%	5	1,767	1,262	6,639	201		2,017	1,372	7,649	216
Delta Junction	8	8	100%	5	0	0	750	0		0	0	750	0
Eagle	45	44	98%	13	1,742	361	8,027	0		1,792	383	8,229	3
Fairbanks North Star Borough	238	223	94%	70	2,807	1,880	5,497	1,235		3,049	2,126	5,946	1,320
College	7	7		2									
Ellison AFB	1	1		1									
Ester	4	4		0									
Fairbanks	171	161		45									
Ft Wainwright	4	4		1									
North Pole	42	38		17									
Salcha	9	8		4									
Healy	5	5	100%	2	0	0	2,283	1,774		0	0	2,283	1,774
Manley	36	32	89%	8	869	2,017	22,187	6,667	3/	1,509	2,637	28,885	8,808
Minto	25	15	60%	8	100	500	3,652	818		249	785	6,800	2,436
Nenana	46	42	91%	12	958	943	12,135	7,381	4/	1,441	1,515	13,956	8,051
Stevens Village	12	12	100%	5	1,051	3,282	659	0		1,051	3,282	659	0
Tok	2	2	100%	0	53	1	131	0		53	1	131	0
Other	7	4	57%	1	218	15	0	0		302	54	0	0
Denali Park	1	1		1									
Dutch Harbor	1	1		0									
Koyukuk	1	1		0									
Port Heiden	1	0		-									
Rampart	1	1		0									
Tooksok Bay	1	0		-									
Unalakleet	1	0		-									
GRAND TOTAL	467	425	91%	133	10,025	10,375	62,224	18,098		11,923	12,269	75,552	22,630

1/ The number of fishermen who did not fish based on returned permits.

2/ These numbers are the expanded harvest numbers from Table 3, sorted by community of residence.

3/ Includes 548 chinook, 416 summer chum, 4042 fall chum, and 1357 coho salmon given away as part of the Departments test fish wheel program.

4/ Includes 418 chinook, 443 summer chum, and 329 fall chum salmon given away as part of the Departments test fish wheel program.

Table 5. Yukon River drainage total utilization of salmon by district and country, 1990.

District	Fishery	Chinook	Summer Chum	Fall Chum	Coho
1	Commercial	51,161	148,911	27,337	13,354
	Subsistence	6,619	36,999	5,335	3,301
	Nonvillage Permits	534	295	60	8
	Total	58,314	186,205	32,732	16,663
2	Commercial	33,213	132,507	37,173	16,435
	Subsistence	9,546	28,453	6,187	6,344
	Total	42,759	160,960	43,360	22,779
3	Commercial	2,341	643	3,715	918
	Subsistence	4,031	3,003	2,056	1,026
	Total	6,372	3,646	5,771	1,944
Total Lower Yukon	Commercial	86,715	282,061	68,225	30,707
	Subsistence a	20,196	68,455	13,578	10,671
	Nonvillage Permits	534	295	60	8
	Total	107,445	350,811	81,863	41,386
4	Commercial	3,538	195,784 b	8,166	0
	Subsistence c	11,184	33,052 e	19,241	3,614
	Total	14,722	228,836	27,407	3,614
5	Commercial	3,365	671	8,976	0
	Subsistence d	13,907	9,738	91,274	11,125
	Nonvillage Permits	2,533	860	4,167	41
	Total	19,805	11,269	104,417	11,166
6	Commercial f	2,989	20,113	58,034	16,208
	Subsistence	3,199	4,937	51,924	21,069
	Nonvillage Permits	560	1,134	1,789	1,288
	Total	6,748	26,184	111,747	38,565
Total Upper Yukon	Commercial	9,892	216,568	75,176	16,208
	Subsistence	28,290	47,727	162,439	35,808
	Nonvillage Permits	3,093	1,994	5,956	1,329
	Total	41,275	266,289	243,571	53,345
Total Yukon Area (Alaska)	Commercial	96,607	498,629	143,401	46,915
	Subsistence	48,486	116,182	176,017	46,479
	Nonvillage Permits	3,627	2,289	6,016	1,337
	Total	148,720	617,100	325,434	94,731
Total Canada g	Commercial	11,291	0	27,207	0
	Subsistence h	7,603	0	6,085	0
	Total	18,894	0	33,292	0
Grand Total	Commercial	107,898	498,629	170,608	46,915
	Subsistence	56,089	116,182	182,102	46,479
	Nonvillage Permits	3,627	2,289	6,016	1,337
	Total	167,614	617,100	358,726	94,731

a Does not include subsistence harvest by Hooper Bay or Scammon Bay residents.

b Total estimated commercial related harvest based on average roe weight per female and proportion of males present in the fishery.

c Includes Innoko and Koyukuk River drainages.

d Includes Chandalar and Black River drainages.

e Does not include commercial related harvest.

f Includes 833 chinook, 5,325 summer chum, 7,060 fall chum, and 1,426 coho salmon sold as part of a department test fishing program.

g Data from Department of Fisheries and Oceans, Whitehorse, YT.

h Combined Indian Food and Domestic fisheries (preliminary).

Table 6. 1990 Yukon River chinook salmon subsistence harvests.

Report Date 04/28/91

Community	Use Group 1				Use Group 2				Use Group 3				Use Group 4				Use Group 5				Combined			
	HH1				HH2				HH3				HH4				HH5				Total			
	HH1	Cont'd	Mean	SE	HH2	Cont'd	Mean	SE	HH3	Cont'd	Mean	SE	HH4	Cont'd	Mean	SE	HH5	Cont'd	Mean	SE	HH	Cont'd	Total	CI (95%)
Alakanuk	23	4	4.2	3.8	35	4	0.0	0.0	52	16	8.6	2.6	16	15	20.1	1.3	0	0	-	-	126	39	871	324
Emmonak	32	5	7.6	3.8	56	6	0.0	0.0	34	8	7.2	1.8	15	15	24.8	0.0	5	5	13.4	0.0	142	39	929	269
Kotlik	27	5	4.0	3.6	20	3	0.0	0.0	33	9	24.7	8.3	15	10	33.5	3.6	6	5	61.4	9.9	101	32	1,796	592
Sheldon's Point	3	1	0.0	6.7	3	3	0.0	0.0	8	6	7.6	2.3	7	7	56.4	0.0	2	2	150.0	0.0	23	19	756	53
District 1	85	15	5.2	2.1	114	16	0.0	0.0	127	39	12.4	2.4	53	47	30.0	1.1	13	12	56.5	4.5	392	129	4,354	729
Marshall	5	3	0.0	0.0	13	2	21.5	19.7	28	7	19.4	6.7	12	9	45.8	7.4	3	3	39.3	0.0	61	24	1,492	648
Mountain Village	11	1	0.0	28.3	48	3	6.0	2.9	55	13	17.9	4.8	23	18	22.5	2.8	1	0	-	0.0	138	35	1,792	862
Pilot Station	12	4	2.5	1.5	42	2	1.5	1.4	42	8	62.1	43.7	7	6	77.5	18.0	0	0	-	-	103	20	3,244	3,613
Pitkas Point	9	8	20.1	4.4	7	4	0.0	0.0	1	0	-	0.0	5	5	32.0	0.0	2	2	25.0	0.0	24	19	391	79
St. Mary's	8	3	25.0	19.7	27	3	0.0	0.0	23	7	22.4	11.8	23	18	50.1	4.1	3	3	72.3	0.0	84	34	2,085	646
District 2	45	19	9.1	7.8	137	14	4.6	2.1	149	35	31.2	12.6	70	56	41.7	2.7	9	8	42.7	0.0	410	132	9,006	3,826
Soly Cross	3	1	0.0	0.0	15	3	11.6	10.4	20	2	55.0	42.6	9	7	95.8	16.2	2	1	100.0	10.0	49	14	2,337	1,725
Russian Mission	3	2	0.0	0.0	23	4	0.0	0.0	20	5	34.0	18.0	10	9	77.4	7.6	2	1	120.0	10.0	58	21	1,694	725
District 3	6	3	0.0	0.0	38	7	4.6	4.1	40	7	44.5	23.1	19	16	86.1	8.6	4	2	110.0	7.0	107	35	4,032	1,871
Ulatna	3	1	0.0	23.5	3	3	2.0	0.0	3	1	20.0	19.1	2	2	3.0	0.0	0	0	-	-	11	7	72	178
Ullakaket	6	3	0.0	0.0	14	4	0.0	0.0	10	3	0.0	0.0	9	9	29.3	0.0	1	1	20.0	0.0	40	20	284	0
Unvik	5	3	0.0	0.0	14	4	5.7	4.8	7	3	37.0	12.4	4	4	10.7	0.0	3	2	33.0	19.0	33	16	481	244
Uttles	9	3	0.0	0.0	20	2	0.0	0.0	2	1	0.0	16.5	0	0	-	-	0	0	-	-	31	6	0	65
Uvalene	50	6	22.0	13.5	72	5	17.6	16.2	39	10	5.5	2.0	14	11	25.5	6.2	6	4	32.5	13.6	181	36	3,134	2,665
Urayling	6	3	0.0	0.0	18	4	0.0	0.0	8	3	13.3	10.5	12	7	1.4	0.9	7	4	3.0	1.9	51	21	144	168
Ughes	5	2	0.0	0.0	8	6	0.6	0.3	5	3	2.3	1.4	6	5	12.2	4.8	1	0	-	0.0	25	16	90	59
Uslia	15	2	0.0	0.0	27	3	0.0	0.0	7	4	2.5	1.6	9	7	14.0	2.6	5	5	11.0	0.0	63	21	198	52
Utag	15	2	3.0	2.7	12	2	49.0	44.7	11	3	28.3	15.8	14	12	88.5	9.5	2	2	30.0	0.0	54	21	2,244	1,139
Uyukuk	12	3	0.0	0.0	17	2	0.0	0.0	8	3	58.3	24.4	4	4	35.0	0.0	1	1	270.0	0.0	42	13	876	382
Uulato	30	4	37.5	34.9	33	2	0.0	0.0	13	4	13.0	4.2	12	10	87.9	9.7	3	3	146.6	0.0	91	23	2,788	2,068
Uuby	18	3	10.0	9.1	35	3	3.3	3.1	10	2	7.0	6.2	10	9	31.4	6.8	4	2	32.5	1.7	77	19	811	430
Uyageluk	7	2	0.0	0.0	11	4	0.0	0.0	3	2	0.0	0.0	6	5	0.2	0.0	6	5	10.2	2.1	33	18	62	24
District 4	181	37	13.5	6.9	284	44	7.2	4.5	126	42	13.3	2.5	102	85	35.6	2.0	39	29	34.6	2.6	732	237	11,189	3,625
Ueaver	12	3	3.3	2.8	11	4	0.0	0.0	6	4	3.2	1.8	7	7	94.5	0.0	1	1	0.0	0.0	37	19	721	71
Uirch Creek	6	0	-	0.0	7	3	0.0	0.0	0	0	-	-	0	0	-	-	0	0	-	-	13	3	0	0
Uhalukytsik	18	3	0.0	0.0	9	4	0.0	0.0	1	1	0.0	0.0	3	3	0.0	0.0	1	1	0.0	0.0	32	12	0	0
Uort Yukon	88	11	13.1	10.5	88	8	0.0	0.0	24	7	11.4	8.3	17	14	92.0	14.5	9	8	116.8	10.2	226	48	4,051	1,939
Uampart	6	4	0.0	0.0	6	4	56.2	32.4	2	1	50.0	20.7	7	6	74.1	10.8	3	2	175.0	72.1	24	17	1,481	595
Utevans Village	6	2	0.0	0.0	13	2	0.0	0.0	6	2	16.5	13.4	9	7	73.0	17.0	4	4	134.7	0.0	38	17	1,295	340
Uanana	22	2	0.0	0.0	76	7	0.0	0.0	8	4	29.2	20.2	8	7	47.8	11.8	22	17	75.8	15.7	136	37	2,284	772
Uenetie	30	4	0.0	0.0	17	3	0.0	0.0	4	3	0.0	0.0	10	9	2.5	0.6	1	1	4.0	0.0	62	20	29	13
District 5	188	29	6.3	4.9	227	35	1.4	0.8	51	22	14.2	5.3	61	53	62.4	5.1	41	34	92.3	10.2	568	173	9,864	2,198
Uukon Totals	505	103	8.9	3.2	800	116	4.0	1.6	493	145	21.1	4.3	305	257	44.6	1.5	106	85	63.2	4.1	2,209	706	38,445	6,054

Table 7. 1990 Yukon River summer chum salmon subsistence harvests.

Report Date 04/28/91

Community	Use Group 1				Use Group 2				Use Group 3				Use Group 4				Use Group 5				Combined			
	HH1		HH2		HH3		HH4		HH5		HH6		HH7		HH8		HH9		HH10		Total	HH	Est	CI (95%)
	Cont'd	Mean	SE	Cont'd	Mean	SE	Cont'd	Mean	SE	Cont'd	Mean	SE	Cont'd	Mean	SE	Cont'd	Mean	SE	Cont'd	Mean	HH	Cont'd	Total	(+/-)
Alakanuk	23	4	60.0	54.5	35	4	0.0	0.0	52	16	75.5	21.2	16	15	122.2	5.9	0	0	-	-	126	39	7,265	3,284
Emmonak	32	5	120.6	87.7	56	6	10.0	9.4	34	8	157.5	49.8	15	15	153.5	0.0	5	5	260.0	0.0	142	39	13,377	6,514
Kotlik	27	5	50.0	45.1	20	3	0.0	0.0	33	9	108.1	24.7	15	10	286.0	45.8	6	5	277.4	31.3	101	32	10,872	3,196
Sheldon's Point	3	1	0.0	118.6	3	3	20.0	0.0	8	6	49.1	14.8	7	7	107.8	0.0	2	2	125.0	0.0	23	19	1,458	735
District 1	85	15	77.5	39.1	114	16	5.4	4.6	127	39	104.2	17.2	53	47	175.5	13.0	13	12	247.2	14.4	392	129	32,973	7,998
Marshall	5	3	0.0	0.0	13	2	0.0	0.0	28	7	41.8	23.6	12	9	55.6	8.7	3	3	150.0	0.0	61	24	2,290	1,313
Mountain Village	11	1	0.0	60.5	48	3	26.6	14.0	55	13	91.6	27.2	23	18	157.7	12.9	1	0	-	0.0	138	35	9,950	3,525
Pilot Station	12	4	7.2	4.8	42	2	0.0	0.0	42	8	90.3	32.9	7	6	133.3	25.6	0	0	-	-	103	20	4,816	2,740
Pitkas Point	9	8	50.0	8.1	7	4	6.2	4.0	1	0	-	0.0	5	5	119.0	0.0	2	2	175.0	0.0	24	19	1,438	154
St. Mary's	8	3	66.0	52.1	27	3	0.0	0.0	23	7	84.7	29.8	23	18	203.4	17.1	3	3	307.3	0.0	84	34	8,077	1,754
District 2	45	19	23.6	17.5	137	14	9.6	4.9	149	35	80.2	15.1	70	56	150.0	7.6	9	8	191.3	0.0	410	132	26,573	4,976
Holy Cross	3	1	0.0	0.0	15	3	0.0	0.0	20	2	5.0	4.7	9	7	59.7	19.8	2	1	110.0	32.5	49	14	857	416
Russian Mission	3	2	0.0	0.0	23	4	0.0	0.0	20	5	68.6	43.6	10	9	68.4	9.7	2	1	45.0	32.5	58	21	2,146	1,727
District 3	6	3	0.0	0.0	38	7	0.0	0.0	40	7	36.8	21.9	19	16	64.3	10.7	4	2	77.5	22.9	107	35	3,003	1,777
Alatna	3	1	0.0	67.1	3	3	0.0	0.0	3	1	24.0	139.2	2	2	0.0	0.0	0	0	-	-	11	7	72	909
Allakaket	6	3	0.0	0.0	14	4	15.0	12.6	10	3	100.0	83.6	9	9	281.8	0.0	1	1	1,500.0	0.0	40	20	5,247	1,676
Anvik	5	3	0.0	0.0	14	4	0.0	0.0	7	3	205.6	149.0	4	4	17.0	0.0	3	2	175.0	101.0	33	16	2,032	2,130
Bettles	9	3	0.0	0.0	20	2	0.0	0.0	2	1	12.0	120.6	0	0	-	-	0	0	-	-	31	6	24	472
Belena	50	6	0.3	0.3	72	5	0.0	0.0	39	10	20.0	17.2	14	11	65.6	18.1	6	4	7.5	4.3	181	36	1,760	1,410
Brayling	6	3	166.6	117.8	18	4	0.0	0.0	8	3	0.0	0.0	12	7	1.5	1.0	7	4	58.7	31.2	51	21	1,430	1,451
Bughes	5	2	0.0	0.0	8	6	8.3	4.1	5	3	33.3	21.0	6	5	46.0	9.0	1	0	-	0.0	25	16	509	241
Bustla	15	2	0.0	0.0	27	3	0.0	0.0	7	4	9.7	4.5	9	7	300.0	63.4	5	5	920.0	0.0	63	21	7,368	1,120
Caltag	15	2	0.0	0.0	12	2	0.0	0.0	11	3	324.0	246.1	14	12	213.7	52.8	2	2	200.0	0.0	54	21	6,956	5,502
Coyukuk	12	3	0.0	0.0	17	2	0.0	0.0	8	3	6.6	5.2	4	4	57.5	0.0	1	1	0.0	0.0	42	13	283	82
Culato	30	4	0.0	0.0	33	2	10.0	9.6	13	4	0.0	0.0	12	10	14.4	3.2	3	3	0.0	0.0	91	23	502	631
Cuby	18	3	10.0	9.1	35	3	0.0	0.0	10	2	0.0	0.0	10	9	17.1	2.8	4	2	0.0	0.0	77	19	351	327
Shageluk	7	2	0.0	0.0	11	4	57.5	38.3	3	2	0.0	0.0	6	5	2.0	0.8	6	5	979.0	115.7	33	18	6,518	1,592
District 4	181	37	6.6	4.1	284	44	4.3	1.9	126	42	56.8	24.8	102	85	98.9	9.5	39	29	342.4	20.2	732	237	33,056	6,865
Chavara	12	3	0.0	0.0	11	4	0.0	0.0	6	4	0.2	0.1	7	7	15.2	0.0	1	1	0.0	0.0	37	19	108	1
Chirch Creek	6	0	-	0.0	7	3	0.0	0.0	0	0	-	-	0	0	-	-	0	0	-	-	13	3	0	0
Chalkyitsik	18	3	0.0	0.0	9	4	0.0	0.0	1	1	0.0	0.0	3	3	30.0	0.0	1	1	0.0	0.0	32	12	90	0
Fort Yukon	88	11	0.0	0.0	88	8	0.0	0.0	24	7	0.0	0.0	17	14	1.2	0.3	9	8	13.8	3.4	226	48	145	61
Leapart	6	4	0.0	0.0	6	4	0.0	0.0	2	1	0.0	30.1	7	6	8.3	3.1	3	2	0.0	0.0	24	17	58	125
Levens Village	6	2	0.0	0.0	13	2	0.0	0.0	6	2	0.0	0.0	9	7	185.7	79.9	4	4	0.0	0.0	38	17	1,671	1,410
Manana	22	2	0.0	0.0	76	7	0.0	0.0	8	4	50.0	35.3	8	7	162.4	18.6	22	17	191.1	35.7	136	37	5,905	1,664
Menetie	30	4	0.0	0.0	17	3	0.0	0.0	4	3	0.0	0.0	10	9	0.0	0.0	1	1	0.0	0.0	62	20	0	0
District 5	188	29	0.0	0.0	227	35	0.0	0.0	51	22	7.8	5.6	61	53	53.2	12.0	41	34	105.6	19.2	568	173	7,979	2,186
Yukon Totals	505	103	17.5	6.9	800	116	3.9	1.2	493	145	69.4	9.1	305	257	112.6	4.9	106	85	216.3	10.7	2,209	706	103,585	11,992

Table 8. 1990 Yukon River fall chum salmon subsistence harvests.

Report Date 04/29/91

Community	Use Group 1				Use Group 2				Use Group 3				Use Group 4				Use Group 5				Combined			
	HH1		HH2		HH3		HH4		HH5		HH6		HH7		HH8		HH9		HH10		Total HH	Est	CI (95%)	
	HH1	Cont'd	Mean	SE	HH2	Cont'd	Mean	SE	HH3	Cont'd	Mean	SE	HH4	Cont'd	Mean	SE	HH5	Cont'd	Mean	SE	HH	Cont'd	Total	(+/-)
Alakanuk	23	4	0.0	0.0	35	4	0.0	0.0	52	16	3.3	1.5	16	15	5.7	0.6	0	0	-	-	126	39	267	163
Emmonak	32	5	0.4	0.3	56	6	16.6	15.7	34	8	1.2	1.0	15	15	13.3	0.0	5	5	0.0	0.0	142	39	1,188	1,730
Kotlik	27	5	25.0	22.5	20	3	0.0	0.0	33	9	12.7	9.4	15	10	14.2	7.1	6	5	60.0	19.7	101	32	1,669	1,376
Sheldon's Point	3	1	0.0	26.3	3	3	0.0	0.0	8	6	5.0	2.5	7	7	8.8	0.0	2	2	0.0	0.0	23	19	102	159
District 1	85	15	8.0	7.2	114	16	8.1	7.7	127	39	5.3	2.5	53	47	10.6	2.0	13	12	27.6	9.1	392	129	3,227	2,222
Marshall	5	3	0.0	0.0	13	2	0.0	0.0	28	7	12.1	6.9	12	9	24.1	7.9	3	3	-365.0	0.0	61	24	1,724	424
Mountain Village	11	1	0.0	0.0	48	3	0.0	0.0	55	13	16.5	8.8	23	18	28.5	5.6	1	0	-	0.0	138	35	1,566	992
Pilot Station	12	4	0.0	0.0	42	2	0.0	0.0	42	8	16.2	14.6	7	6	26.0	5.8	0	0	-	-	103	20	864	1,206
Pitkas Point	9	8	0.0	0.0	7	4	0.0	0.0	1	0	-	0.0	5	5	30.0	0.0	2	2	0.0	0.0	24	19	150	0
St. Mary's	8	3	0.0	0.0	27	3	0.0	0.0	23	7	9.4	7.8	23	18	15.1	2.4	3	3	80.3	0.0	84	34	806	370
District 2	45	19	0.0	0.0	137	14	0.0	0.0	149	35	14.4	5.5	70	56	23.2	2.5	9	8	148.4	0.0	410	132	5,111	1,660
Holy Cross	3	1	0.0	3.7	15	3	8.3	7.4	20	2	0.0	0.0	9	7	110.4	37.7	2	1	30.0	15.0	49	14	1,178	704
Russian Mission	3	2	4.0	2.3	23	4	0.0	0.0	20	5	14.8	10.9	10	9	45.0	10.9	2	1	60.0	15.0	58	21	878	484
District 3	6	3	2.0	2.2	38	7	3.2	2.9	40	7	7.4	5.4	19	16	75.9	18.7	4	2	45.0	10.6	107	35	2,056	854
Alatna	3	1	0.0	98.2	3	3	83.3	0.0	3	1	100.0	29.1	2	2	15.0	0.0	0	0	-	-	11	7	580	602
Allakaket	6	3	0.0	0.0	14	4	0.0	0.0	10	3	0.0	0.0	9	9	218.8	0.0	1	1	500.0	0.0	40	20	2,470	0
Anvik	5	3	0.0	0.0	14	4	0.0	0.0	7	3	60.6	33.8	4	4	24.7	0.0	3	2	20.0	11.5	33	16	583	468
Bettles	9	3	0.0	0.0	20	2	0.0	0.0	2	1	0.0	25.2	0	0	-	-	0	0	-	-	31	6	0	98
Galena	50	6	4.5	2.8	72	5	0.0	0.0	39	10	21.6	12.5	14	11	95.7	20.6	6	4	132.5	70.8	181	36	3,202	1,419
Grayling	6	3	233.3	164.9	18	4	0.0	0.0	8	3	0.0	0.0	12	7	0.1	0.0	7	4	0.5	0.3	51	21	1,405	1,940
Hughes	5	2	0.0	0.0	8	6	0.8	0.4	5	3	0.6	0.4	6	5	10.0	4.0	1	0	-	0.0	25	16	70	48
Huslia	15	2	0.0	0.0	27	3	0.0	0.0	7	4	0.0	0.0	9	7	60.7	19.8	5	5	60.0	0.0	63	21	846	350
Kaltag	15	2	75.0	69.8	12	2	0.0	0.0	11	3	0.0	0.0	14	12	46.5	7.1	2	2	275.0	0.0	54	21	2,327	2,062
Koyukuk	12	3	0.0	0.0	17	2	0.0	0.0	8	3	35.0	6.8	4	4	95.0	0.0	1	1	200.0	0.0	42	13	860	107
Nulato	30	4	50.0	46.5	33	2	0.0	0.0	13	4	2.5	2.0	12	10	150.3	14.3	3	3	70.0	0.0	91	23	3,546	2,758
Ruby	18	3	0.0	0.0	35	3	3.3	3.1	10	2	0.0	0.0	10	9	203.5	51.6	4	2	300.0	212.1	77	19	3,352	1,958
Shageluk	7	2	0.0	0.0	11	4	0.0	0.0	3	2	0.0	0.0	6	5	0.0	0.0	6	5	0.0	0.0	33	18	0	0
District 4	181	37	23.4	11.2	284	44	1.3	0.3	126	42	14.9	4.4	102	85	87.4	6.3	39	29	97.9	24.3	732	237	19,243	4,712
Beaver	12	3	0.0	0.0	11	4	0.0	0.0	6	4	0.0	0.0	7	7	16.7	0.0	1	1	640.0	0.0	37	19	757	0
Birch Creek	6	0	-	0.0	7	3	0.0	0.0	0	0	-	-	0	0	-	-	0	0	-	-	13	3	0	0
Chalkyitsik	18	3	0.0	0.0	9	4	6.0	4.4	1	1	0.0	0.0	3	3	312.0	0.0	1	1	500.0	0.0	32	12	1,490	78
Fort Yukon	88	11	9.0	8.5	88	8	0.0	0.0	24	7	4.2	3.6	17	14	136.1	18.3	9	8	934.5	124.9	226	48	11,627	2,722
Lampart	6	4	275.0	158.7	6	4	925.0	534.0	2	1	0.0	43.1	7	6	463.3	123.5	3	2	125.0	72.1	24	17	10,818	6,783
Stevens Village	6	2	0.0	0.0	13	2	0.0	0.0	6	2	100.0	81.6	9	7	92.8	22.0	4	4	605.5	0.0	38	17	3,857	1,036
Tanana	22	2	0.0	0.0	76	7	0.8	0.8	8	4	50.0	35.3	8	7	253.5	36.3	22	17	1,756.8	181.0	136	37	41,145	7,849
Tenetie	30	4	0.0	0.0	17	3	0.0	0.0	4	3	33.3	16.6	10	9	444.4	47.7	1	1	800.0	0.0	62	20	5,377	945
District 5	188	29	13.0	6.4	227	35	24.9	14.1	51	22	24.2	11.4	61	53	228.1	17.9	41	34	1,263.3	101.1	568	173	75,073	10,817
Yukon Totals	505	103	14.6	4.8	800	116	8.8	4.1	493	145	12.6	2.4	305	257	86.8	4.3	106	85	542.3	40.1	2,209	706	104,713	12,151

Table 9. 1990 Yukon River coho salmon subsistence harvests.

Report Date 04/28/91

Community	Use Group 1				Use Group 2				Use Group 3				Use Group 4				Use Group 5				Combined			
	HH1		SE		HH2		SE		HH3		SE		HH4		SE		HH5		SE		Total HH	HH Cont'd	Est Total	CI (95%) (+/-)
Alakanuk	23	4	0.0	0.0	35	4	0.0	0.0	52	16	0.5	0.3	16	15	7.9	0.9	0	0	-	-	126	39	156	44
Emmonak	32	5	1.4	0.9	56	6	0.0	0.0	34	8	7.5	5.3	15	15	7.6	0.0	5	5	0.0	0.0	142	39	413	362
Kotlik	27	5	0.0	0.0	20	3	0.0	0.0	33	9	13.2	9.3	15	10	2.0	1.1	6	5	100.8	24.8	101	32	1,071	671
Sheldon's Point	3	1	0.0	1.1	3	3	0.0	0.0	8	6	9.8	4.0	7	7	0.0	0.0	2	2	0.0	0.0	23	19	78	64
District 1	85	15	0.5	0.3	114	16	0.0	0.0	127	39	6.2	2.8	53	47	5.1	0.4	13	12	46.5	11.4	392	129	1,719	767
Marshall	5	3	0.0	0.0	13	2	0.0	0.0	28	7	34.2	15.4	12	9	28.6	10.9	3	3	267.6	0.0	61	24	2,107	885
Mountain Village	11	1	0.0	0.4	48	3	0.0	0.0	55	13	21.0	16.7	23	18	26.0	10.3	1	0	-	0.0	138	35	1,754	1,865
Pilot Station	12	4	0.0	0.0	42	2	0.0	0.0	42	8	23.1	20.8	7	6	18.3	6.9	0	0	-	-	103	20	1,099	1,715
Pitkas Point	9	8	0.2	0.0	7	4	0.0	0.0	1	0	-	0.0	5	5	10.0	0.0	2	2	0.0	0.0	24	19	52	1
St. Mary's	8	3	0.0	0.0	27	3	0.0	0.0	23	7	12.8	5.2	23	18	7.2	1.6	3	3	0.0	0.0	84	34	463	249
District 2	45	19	0.0	0.1	137	14	0.0	0.0	149	35	22.6	9.0	70	56	18.4	3.9	9	8	89.2	0.0	410	132	5,476	2,696
Holy Cross	3	1	0.0	0.0	15	3	0.0	0.0	20	2	10.0	9.4	9	7	4.2	2.0	2	1	50.0	25.0	49	14	338	386
Russian Mission	3	2	0.0	0.0	23	4	0.0	0.0	20	5	22.2	9.3	10	9	24.4	6.3	2	1	0.0	25.0	58	21	688	399
District 3	6	3	0.0	0.0	38	7	0.0	0.0	40	7	16.1	6.6	19	16	14.8	3.4	4	2	25.0	17.6	107	35	1,027	556
Alatna	3	1	0.0	2.0	3	3	0.0	0.0	3	1	0.0	16.7	2	2	2.5	0.0	0	0	-	-	11	7	5	99
Allakaket	6	3	0.0	0.0	14	4	0.0	0.0	10	3	0.0	0.0	9	9	0.6	0.0	1	1	25.0	0.0	40	20	31	0
Anvik	5	3	0.0	0.0	14	4	0.0	0.0	7	3	24.0	9.4	4	4	5.7	0.0	3	2	15.0	8.6	33	16	236	139
Bettles	9	3	0.0	0.0	20	2	0.0	0.0	2	1	0.0	14.5	0	0	-	-	0	0	-	-	31	6	0	56
Galena	50	6	0.3	0.3	72	5	0.0	0.0	39	10	13.4	10.7	14	11	2.3	0.8	6	4	0.0	0.0	181	36	572	819
Grayling	6	3	0.0	0.0	18	4	0.0	0.0	8	3	0.0	0.0	12	7	0.0	0.0	7	4	1.5	0.9	51	21	10	13
Hughes	5	2	0.0	0.0	8	6	0.0	0.0	5	3	3.3	2.1	6	5	4.4	1.1	1	0	-	0.0	25	16	43	24
Huslia	15	2	0.0	0.0	27	3	0.0	0.0	7	4	0.5	0.3	9	7	3.5	1.6	5	5	40.0	0.0	63	21	235	30
Kaltag	15	2	2.0	1.8	12	2	1.5	1.3	11	3	0.0	0.0	14	12	31.6	6.5	2	2	5.0	0.0	54	21	501	191
Koyukuk	12	3	0.0	0.0	17	2	0.0	0.0	8	3	0.0	0.0	4	4	40.5	0.0	1	1	0.0	0.0	42	13	162	0
Mulato	30	4	0.0	0.0	33	2	20.0	19.3	13	4	0.0	0.0	12	10	13.8	2.6	3	3	6.6	0.0	91	23	845	1,255
Ruby	18	3	5.0	4.5	35	3	0.6	0.6	10	2	0.0	0.0	10	9	46.1	9.0	4	2	100.0	70.7	77	19	974	605
Shageluk	7	2	0.0	0.0	11	4	0.0	0.0	3	2	0.0	0.0	6	5	0.0	0.0	6	5	0.0	0.0	33	18	0	0
District 4	181	37	0.7	0.4	284	44	2.4	2.2	126	42	5.6	3.3	102	85	13.3	1.3	39	29	18.2	7.2	732	237	3,616	1,638
Beaver	12	3	0.0	0.0	11	4	0.0	0.0	6	4	0.0	0.0	7	7	7.1	0.0	1	1	122.0	0.0	37	19	172	0
Birch Creek	6	0	-	0.0	7	3	0.0	0.0	0	0	-	-	0	0	-	-	0	0	-	-	13	3	0	0
Chalkyitsik	18	3	0.0	0.0	9	4	0.0	0.0	1	1	0.0	0.0	3	3	1.3	0.0	1	1	0.0	0.0	32	12	4	0
Fort Yukon	88	11	0.0	0.0	88	8	0.0	0.0	24	7	0.0	0.0	17	14	0.4	0.1	9	8	80.0	25.7	226	48	727	453
Rampart	6	4	25.0	14.4	6	4	25.0	14.4	2	1	0.0	1.2	7	6	41.6	7.5	3	2	0.0	0.0	24	17	591	261
Stevens Village	6	2	0.0	0.0	13	2	0.0	0.0	6	2	0.0	0.0	9	7	30.0	13.3	4	4	52.2	0.0	38	17	479	235
Tanana	22	2	0.0	0.0	76	7	0.0	0.0	8	4	2.0	1.4	8	7	78.5	15.3	22	17	360.7	57.8	136	37	8,580	2,505
Venetie	30	4	0.0	0.0	17	3	4.0	3.6	4	3	0.0	0.0	10	9	28.0	8.7	1	1	0.0	0.0	62	20	348	210
District 5	188	29	0.7	0.4	227	35	0.9	0.4	51	22	0.3	0.2	61	53	25.1	3.2	41	34	219.1	31.5	568	173	10,902	2,579
Yukon Totals	505	103	0.6	0.2	800	116	1.1	0.8	493	145	11.2	3.0	305	257	15.5	1.2	106	85	105.7	12.5	2,209	706	22,742	4,183